

REMARKS

In the Office Action, claims 1-10 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1-10 were rejected under 35 U.S.C. § 102 (b) as being anticipated by WO 97/12637 ("WO publication").

In this response, claims 1-10 have been cancelled. New claims 11-23 have been added. Original claims 1-10 as originally presented were a direct translation of the original claims of the priority document. Those claims have been rewritten to correct informalities and to put the language in better form for U.S. examination as well as to address the 35 U.S.C. § 112 issues. Because of the numerous informal changes, it was easier to cancel claims 1-10 and rewrite them as claims 11-23 rather than amending them. Each one of the new claims 11-23 corresponds, respectively, to the previous claims 1-10 as described below. Upon entry of the amendments, claims 11-23 will be pending.

Reconsideration of the application in view of the following remarks is respectfully requested.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 1-10 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the Examiner stated that claim 1 is vague and indefinite as to what structure is intended. Applicants respectfully submit that the claim language in new claim 11, which corresponds to previous claim 1, clarifies that the detector volume houses the indicator, and the detector volume is connected to the sterilization chamber by a gas-collection-volume. Claim 11 also recites "that a cross section and a volume of each stage decrease between neighboring stages towards a direction of the detector volume," thus clearly describing that the gas-collection-volume has a tapering cross sectional area reduction.

With respect to claim 3, the Examiner states that the use of “mm<sup>2</sup>” as a volume is confusing. Claim 14, which corresponds to previous claim 3, recites that a cross sectional area, and not a volume, is approximately 1 to 200 mm<sup>2</sup>.

With respect to claim 4, the Examiner states that it is not clear if the channel is connected to the detector or sterilization chamber, and that “better ca.” appears to be a typographical error. Claims 15 and 16, which correspond to previous claim 4, recite that the stage of the gas-collection volume is directly adjacent to the detector volume, and that a channel length is approximately 30 to 100 cm.

With respect to claims 5-8, the Examiner states that it is not clear what structures are intended by stages. New claim 11 recites that the gas-collection volume includes multiple stages. Claims 17-20, which depend from claim 11 and correspond to previous claims 5-8, clearly define the “stages.”

With respect to claim 9, the Examiner states that it is not clear what the minimum collector volume is. Claim 21, which corresponds to previous claim 9, recites that detector volume is approximately 100μl to 500 μl, thus including a minimum volume. Support is found, for example, in paragraph [0021] of the published specification.

Withdrawal of the rejections under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Rejection under 35 U.S.C. § 102 (b)

Claims 1-10 were rejected under 35 U.S.C. § 102 (b) as being anticipated by the WO publication.

The WO publication describes a system for determining the efficacy of sterilization cycles in sterilizers. In an embodiment, device 1 to be located in a sterilization chamber includes a tube 2 and a bore 3 with a sensor 7 disposed at the closed end of the tube. *See* Fig. 3. In another embodiment,

the bore is divided into several communicating compartments 47, wherein one compartment 47 at one end of bore 3 incorporates opening 5, and another compartment 47 at the other end of bore 3 incorporates sensor 7. *See* Fig. 6.

As described above, new claims 11-23 replace and correspond to previous claims 1-10. New claim 11 recites a detector volume housing an indicator and a gas-collection-volume connecting the detector volume to a sterilization chamber, wherein the gas-collection volume includes multiple stages such that a cross sectional area and a volume of each stage decrease between neighboring stages towards a direction of the detector volume.

The multi-stage design allows engineering freedom through the use of various parameters such as cross-sections and/or volumes of the individual stages in relation to each other so as to selectively and controllably influence the overall sensitivity of the device. Through the selection of a cross-section and/or volume of each stage of the gas-collector-volume with respect to the other stages, the gas concentration and/or transportation properties in the gas transport system between the sterilization chamber and the collector-volume can be varied, therefore allowing flexibility for providing a system sensitivity corresponding to a desired purpose.

Applicants respectfully submit that the WO publication does not describe the feature wherein the gas-collection volume includes multiple stages such that a cross sectional area and a volume of each stage decrease between neighboring stages towards a direction of the detector volume. On the contrary, the WO publication describes one embodiment including a single stage in Fig. 3 having bore 3 leading to sensor 7 and another embodiment including multiple stages 47 such that a volume of each stage remains the same towards a direction of each sensor. *See* Fig. 3 and 6. Indeed, the embodiment of Fig. 6 shows an increase in volume between bore opening 5 and compartment 47, but no decrease in volume between neighboring stages as recited in claim 11.

Because the WO publication does not teach all of the features of claim 11, withdrawal of the rejection under 35 U.S.C. § 102 (b) is respectfully requested.

CONCLUSIONS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Commissioner is hereby authorized to charge any unpaid fees deemed required in connection with this submission, including any additional filing or application processing fees required under 37 C.F.R. §1.16 or 1.17, or to credit any overpayment, to Deposit Account No. 04-0100.

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